



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/805,777      | 03/22/2004  | Lee H. Angros        | 233.032             | 9934             |

30589 7590 01/08/2007  
DUNLAP, CODDING & ROGERS P.C.  
PO BOX 16370  
OKLAHOMA CITY, OK 73113

|          |
|----------|
| EXAMINER |
|----------|

ALEXANDER, LYLE

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1743

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|----------------------------------------|------------|---------------|
| 3 MONTHS                               | 01/08/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/805,777

Applicant(s)

ANGROS, LEE H.

Examiner

Lyle A. Alexander

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) 83-86, 88, 95-98, 101, 104, 107-115, 117, 120-125, 127-128, 132-135 and 184-195 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 83-86, 88, 95-98, 101, 104, 107-115, 117, 120-125, 127-128, 132-135 and 184-195 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanus et al. (USP 4,521,621).

Yanus et al. teach in column 12 lines 17+ polysiloxanes are transparent materials and are employed in 10-75% solutions, where the balance of the solution has been read on the claimed "solvent". Examples IV, VI, VII etc. the formation of a 200 Angstrom siloxane layers which have been read on the claimed layer of "... less than 0.0001 inch". Column 6 lines 24+ teaches the use of strong mineral acids. The claimed language "... applicator device is a pen or is pen-like" is sufficiently broad that it has been read on the means by which the 200 Angstrom layer was formed.

Yanus et al. are silent to the claimed "constructed of a material which is different from a material used to construct the body".

The court decided In re Larson (144 USPQ 347) the use of a one piece construction instead of a device made from different components would have been a matter of obvious engineering choice. It would have been desirable to make the elements of the Bird application that are not contacting the surface out of less expensive, light weight materials, such as a plastic. It would have been within the skill of the art to modify Yanus et al. and make the non-surface contacting portion of the Bird

Art Unit: 1743

applicator out of a less expensive and light weight materials, such as plastic, as a matter of obvious engineering design choice.

Claims 83-86, 88, 95-98, 101, 104, 107-115, 117, 120-125, 127-128, 132-135 and 184-195 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Badesha et al. (USP 4,855,201).

Badesha et al. teach in examples I and IV a Bird Applicator applying a silicon layer having a thicknesses of 0.4 and 2 microns respectively in the presence of other solvating materials. This has been read on the claimed solvent and silicon layer of less than 0.0001 inch. The claimed language "... applicator device is a pen or is pen-like" is sufficiently broad that it has been read on the Bird Applicator.

Yanus et al. are silent to the claimed "constructed of a material which is different from a material used to construct the body".

The court decided In re Larson (144 USPQ 347) the use of a one piece construction instead of a device made from different components would have been a matter of obvious engineering choice. It would have been desirable to make the elements of the Bird application that are not contacting the surface out of less expensive, light weight materials, such as a plastic. It would have been within the skill of the art to modify Badesha et al. and make the non-surface contacting portion of the Bird applicator out of a less expensive and light weight materials, such as plastic, as a matter of obvious engineering design choice.

***Response to Arguments***

Applicant's arguments filed 10/18/06 have been fully considered but they are not persuasive.

Applicants' state Badesha et al. teaches a "Bird" applicator that cannot be read on the instant claims. Applicants' state a "typical Bird applicator" is constructed of hard metal and would not properly function if made of an absorbent material. The Office does not find this argument convincing because the "Bird" application taught by Badesha et al. may not be the described "typical Bird applicator" described by Applicants'. The Office also maintains the claimed language of "absorbent material" is sufficiently broad to read on just about any material of construction because metals are absorbent to some materials. Applicants' could be considered actually claiming the materials that have the desired characteristics.

Applicants' 10/18/06 37 CFR 1.132 has been considered. The Declaration was incomplete as referenced attachments 1-4 were not present. The supplied 3 pages of the Declaration are the opinion of Mr. Angros and have been given the appropriate weight. Dr. Corbett graciously faxed the intended attachments 1-4 which are attached to this Office action. These attachments provide information and specifications of "Bird" applicators. However, these attachments do not claim to show the exact "Bird" applicators of the cited prior art. In the absence of showing the "Bird" applicators of the cited prior art, it is difficult to draw any conclusions and these attachments were not convincing to overcome the art of record.

Applicants' traverse the 35 USC 103 rejections of record for the same reasons as above. The Office also maintains the above position.

***Conclusion***

This is a continuation of applicant's earlier Application No. 10/805,777. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lyle A. Alexander whose telephone number is 571-272-1254. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lyle A Alexander  
Primary Examiner  
Art Unit 1743

A handwritten signature in black ink, appearing to be 'Lyle A. Alexander', written in a stylized, cursive-like font.

Continuation of Disposition of Claims: Claims pending in the application are 83-86,88,95-98,101,104,107-115,117,120-125,127,128,132-135 and 184-195.



**DUNLAP, CODDING & ROGERS, P.C.**  
**ATTORNEYS AT LAW**  
**1601 N.W. Expressway, Suite 1000**  
**Oklahoma City, Oklahoma 73118**

Telephone  
(405) 607-8600

Telefax  
(405) 607-8686

**F A C S I M I L E   M E S S A G E**

TO FACSIMILE NO.: 571-273-1254

ATTENTION: Lyle Alexander

FROM: Christopher W. Corbett, Ph.D.

SUBJECT:      Applicant: Lee H. Angros      Attny: Dkt. No.: 233.032  
                 Serial No.: 10/805,777      Conf. No.: 9934  
                 Filed: 03/22/2004  
                 Art Unit: 1743  
                 Title: ANALYTIC PLATE WITH  
                 CONTAINMENT BORDER AND METHOD

DATE: January 3, 2007

PAGES: 9 plus this transmittal page.

Call (405) 607-8600 if you should have any questions regarding this transmittal.

\*\*\*\*\*

Per your request, enclosed are copies of Attachments 1-4 relating to the above-identified patent application.

Thank you,

CWC/kbl

**CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. § 1.8(a))**

I hereby certify that this correspondence is, on the date shown below, being transmitted by facsimile to the United States Patent and Trademark Office.

Christopher W. Corbett  
Name of applicant, assignee or  
registered representative

[Signature]  
Signature

1/3/07  
Date

IMPORTANT: This message is intended for the recipient indicated above. It may contain information which is confidential or protected from disclosure by the attorney-client privilege or work-product doctrine. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are advised that any dissemination, distribution or copying of the communication is strictly prohibited. If you have received this message in error, please mail to DUNLAP, CODDING & ROGERS, P.C., 1601 N.W. Expressway, Suite 1000, Oklahoma City, Oklahoma 73118. We will reimburse you for your postage. Thank you.

Jardco :: Bird Type Film Applicators

Attachment 1

# Bird Type Film Applicators

**Stainless Steel or Nickel Chrome Steel**  
**MADE IN U.S.A.**

**ASTM DESIGNATION 823, 333, 2486, 3258, 3265**

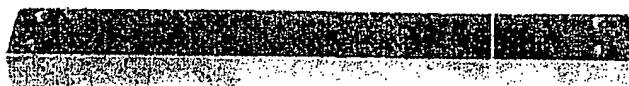
**Fed. Spec. TT-P-29 "Paint, Latex Base, Interior, Flat White & Tints"**

**Fed. Spec. TT-E-508A, "Enamel, Interior, Semigloss, Tints & White"**

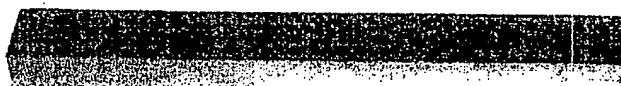
**Fed. Spec. PD-220A "Detergent, General Purpose"**

For laying down wet films of materials in predetermined thicknesses. These precision wet film applicators are used in conjunction with paper charts, hiding power charts, plate glass or any other smooth flat surfaces. They are simple, accurate experimental or quality control devices that require no adjustments.

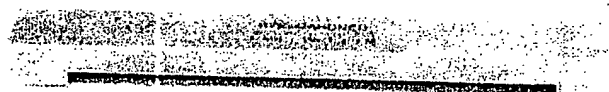
Bird Type Film Applicators are available in both Stainless Steel Corrosion Resistance Nickel Chrome Finish or Aluminum. In addition a greater variety of film widths is available. Any Bird Applicator desired that is not listed in the table will be considered as special, and must be made to order at the price indicated.



**Bird Applicator (Nickel Chrome Plated Steel)**



**Bird Applicator (No holes - Stainless Steel)**



**Bird Applicator (Aluminum)**

These applicators are fabricated from hardened and ground steel machined to a fine tolerance. When ordering be sure to specify Stainless Steel, Nickel Chrome Finish or Aluminum, Film Path Width, Depth of Cut and Wet Film Thickness/ Mark desired.

The Wet Film Thickness is the nominal thickness of the coating when drawn down. The Wet Film Thickness is normally approximately one-half of the Cut, or actual gap clearance (depth) of the applicator. Example: An applicator with a .012" (12 mils) Cut Depth will lay down a Wet Film Thickness of .006" (6 mils). The Mark, or Wet Film Thickness is engraved on the end of the bar.

*We can give no guarantee of the wet thickness that will be obtained. The wet thickness is dependent upon the solids and vehicle content of the wet material as well as other factors. Film thickness deposited may vary from 40% to 80% of the actual gate clearance of the applicator.*

**Be sure to order exact applicator desired.**

**These applicators cannot be returned for credit or exchange.**

## Available items

| Overall Width                         | Film Width | Depth of Cut | Wet Film Thickness | Mark - Mils |
|---------------------------------------|------------|--------------|--------------------|-------------|
| <b>NON-STANDARD WIDTH APPLICATORS</b> |            |              |                    |             |
| 1-3/4"                                | 1/4"       | any"         | any"               | any"        |
| 2"                                    | 1/2"       | any"         | any"               | any"        |

Gardco :: Bird Type Film Applicators

<http://www.gardco.com/pages/application/birdtypefilmapp.htm>

| 2-1/2"                     | 1"     | any"  | any"   | any"  |
|----------------------------|--------|-------|--------|-------|
| STANDARD WIDTH APPLICATORS |        |       |        |       |
| 3-1/2"                     | 2"     | .006" | .003"  | 3     |
| 4-1/2"                     | 3"     | .002" | .001"  | 1     |
| 4-1/2"                     | 3"     | .003" | .0015" | 1-1/2 |
| 4-1/2"                     | 3"     | .006" | .003"  | 3     |
| 4-1/2"                     | 3"     | .012" | .006"  | 6     |
| 5"                         | 3-1/2" | .003" | .0015" | 1-1/2 |
| 5"                         | 3-1/2" | .006" | .003"  | 3     |
| 5"                         | 3-1/2" | .010" | .005"  | 5     |
| 5"                         | 3-1/2" | .012" | .006"  | 6     |
| 5"                         | 3-1/2" |       |        | 10    |
| 7-1/2"                     | 6"     | .001" | .0005" | 1/2   |
| 7-1/2"                     | 6"     | .002" | .001"  | 1     |
| 7-1/2"                     | 6"     | .003" | .0015" | 1-1/2 |
| 7-1/2"                     | 6"     |       |        | 2     |
| 7-1/2"                     | 6"     |       |        | 2-1/2 |
| 7-1/2"                     | 6"     | .006" | .003"  | 3     |
| 7-1/2"                     | 6"     | .008" | .004"  | 4     |
| 7-1/2"                     | 6"     | .010" | .005"  | 5     |
| 7-1/2"                     | 6"     | .012" | .006"  | 6     |
| 7-1/2"                     | 6"     |       |        | 8     |
| 7-1/2"                     | 6"     |       |        | 10    |
| 7-1/2"                     | 6"     |       |        | 12    |
| 7-1/2"                     | 6"     |       |        | 20    |

Film widths not listed up to 6"

Film widths not listed over 6" to 12"

Film widths not listed over 12" to 15"

Stainless Steel non-magnetic type 304

Stainless Steel magnetic type 410

**Be sure to order exact applicator desired.**  
**These applicators cannot be returned for credit or exchange.**

**Ordering Information**

When ordering, please use the following example to obtain the proper order code.

AP-(Film Width) x (Wet Film Thickness) Stainless Steel or nickel Chrome

i.e. AP-2x003 SS or AP-2x003 NK

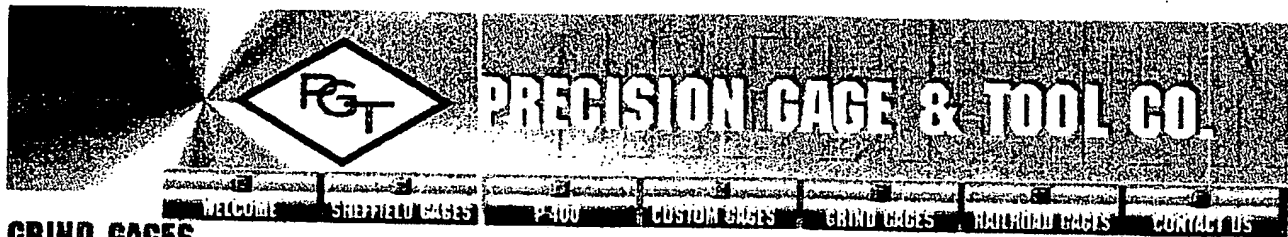
**440C Applicators include Certification Traceable to N.I.S.T.**

Home | Products | Application | How To Order | Return To The Top  
 Of The Page

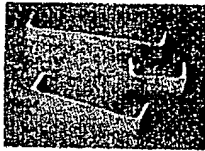
Paul N. Gardner Company, Inc. • Phone 1.800.762.2478 • Fax  
 954.946.9309

grind gage, ink gage, Bird applicator, Hegman gage

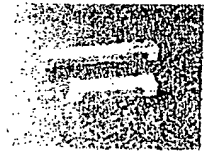
Attachment 2

**GRIND GAGES**

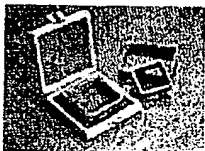
"Click" on image for a larger view

**APPLICATORS**

Easy-to-use, accurate Precision Wet Film Applicators lay down a uniform thickness of film for observation and testing. Their reliability has made them a standard in both experimental and quality control situations.

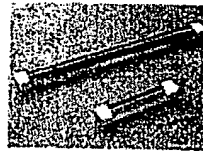


Applicators are available in a variety of styles: 2-path chrome plated steel models are available in 2"- 14" path widths; 2-path hardened 440-C stainless steel applicators may be ordered in 2"- 10" path widths; 8-path film applicators in 2"- 4" path widths are made of hardened 440-C stainless steel.



Order by applicator style, film width and actual path depth.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe Acrobat Reader.)

**BIRD-STYLE APPLICATORS**

The Bird Style applicator varies from other applicators. They are marked with 1/2 the actual path depth or gap clearance. Each Bird Style applicator comes with a long form certification for traceability. Bird Style applicators are machined from hardened 440-C stainless steel or can be chrome plated for extra rust protection.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe Acrobat Reader.)

**INK GAGES, GRIND GAGES AND SCRAPERS**

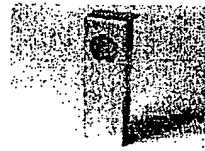
The grind gage is an easy to use, relatively inexpensive production and quality control instrument that enables the manufacturer to check for unwanted agglomerates as well as particles that are too large. Many industries, including paint, ink, adhesive, food and pharmaceuticals, use a grind gage.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe Acrobat Reader.)

**VACUUM PLATE GAGE**

304 stainless steel top, tool steel base. 300 Series Vacuum Plate Gage measures 9" x 12".

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe Acrobat Reader.)

**SEALANT SLUMP FLOW TEST JIG**

Required for laboratory testing for the degree of slump of a sealant when applied to a vertical joint. When used according to ASTM D-2202, reveals slump in .01" increments.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe Acrobat Reader.)

**WEDGE PLATES & SPECIALS**

Wedge printing plates are used for quick and easy proof press testing of stocks and inks. They are especially effective in the routine production of standard prints having controlled ink

**QUICK CHECK PROOFING PRESS**

The Quick Check Proof Press is a portable proof press ideal for uniform film or variable film print testing at various locations. The press is available with either a .4mil plate for

grind gage, ink gage, Bird applicator, Hegman gage

<http://www.pgtgage.com/grindgag.htm>

film thickness.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe  
Acrobat Reader.)

constant film thickness or a .2 to .6  
mil tapered plate for a variable film  
thickness. [Click here for Quick  
Check Proofing Press User's Guide](#)  
(217k file requires Adobe Acrobat  
Reader)

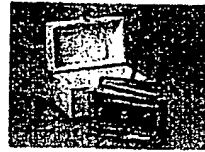
#### ADHESION TESTERS



The Cross-Cut Kit measures adhesion  
and flexibility in accordance with  
ASTM Test Method D-3359. Kit  
includes blade, blade holder/handle,  
hex wrench for changing blades,  
extra clamp screw, flaking and  
cleaning brush, test tape and lighted  
magnifier, all in a finished wooden  
case. [Click here for instruction  
manual](#) (65k .pdf file requires Adobe  
Acrobat Reader)



#### CONICAL MANDREL



The conical mandrel is used to test  
the elongation of attached coatings in  
accordance with ASTM Test Method  
D-522.

[Click here for Grind Gage catalog.](#)  
(1.4Mb .pdf file requires Adobe  
Acrobat Reader.)

[Precision Gage & Tool  
Warranty Statement](#)

[RETURN TO TOP](#)

film application by elcometer

## Attachment 3

## film applicators - draw down & motorised film applicators



Any measurements made on a coating - whether for the purpose of describing their appearance or their physical properties - are made on the basis of uniform and comparable samples with precisely controlled thicknesses. Elcometer has a wide range of film applicators and motorised applicators.

Film Applicators - high precision instruments used to apply a coating of a specified thickness

Motorised Film Applicators - when generating a large number of samples, these units are designed to give greater repeatability & reproducibility between each sample.

Elcometer also offers a complete range of Vacuum Tables and Test Charts from Leneta - the industry standard for testing many coating's properties.

**Please click on the appropriate image or image title to view the product details**

### Elcometer 4340 Motorised Film Applicator / Automatic Film Applicators



When preparing a wide range of samples with different coatings and on various substrates, the Elcometer 4340 film applicator is the unit for you. Designed with 11 pre-set speeds, coatings can be applied with total consistency. A range of tables and adaptations can be selected. Vacuum, electromagnetic or heated tables, drying time recorders and gelatine devices are available.



### Elcometer 4360 Spiral Bar Coaters

Made of stainless steel, these wire wound bar coaters are used to spread coatings which have a high levelling ability. Coatings can be applied to a wide range of substrates, including flexible ones!



### Elcometer 3520 Baker Film Applicator

The baker film applicator is made of hardened stainless steel and has a cylindrical applicator body. Used to apply a pre-defined thickness and film width on flat, relatively firm surfaces.



### Elcometer 3525 & Elcometer 3530 Adjustable Baker Film Applicators

Similar to the Elcometer 3520 baker gauges above, the adjustable baker applicator allows the user to determine the thickness of the film being applied. Using the thickness markings on each side of the gauge, the operator can produce either a uniform film or a film wedge.



### Elcometer 3540 & Elcometer 3550 Bird Film Applicators

The bird applicators have a flat edged prismatic body and are manufactured out of precision ground stainless steel and are suitable for various coatings which are applied to flat and relatively strong substrates.



### Elcometer 3545 Adjustable Bird Film Applicators

The adjustable version of the bird film applicator allows the user to determine the thickness of the film being applied. Adjusting the gap size using the scales on either side the operator can produce either a uniform or wedged film thickness.



### Elcometer 3580 Casting Knife Film Applicator

Manufactured out of anodised aluminium and with a bevelled blade, these applicators are ideal for manually applying thick layers of coatings on solid and flat substrates. Films can be applied up to 6mm thick - the thickness being determined using the micrometric screws on the unit.



### Elcometer 3570 Micrometric Film Applicators

For high precision, manual application of a film, the Elcometer 3570 micrometric film applicator is ideal. The film thickness can be adjusted in 1 micron steps - using the micrometric screw.



### Elcometer 3600 Doctor Blade Film Applicator

This simple applicator can be adjusted to allow the user to apply a uniform film up to a thickness of 1mm (40 mils). Accurate thickness settings are produced using the thickness standards supplied with the gauge.



### Elcometer 3700 Doctor Blade Film Applicator - with reservoir

Similar in operation and design to the Elcometer 3600, this unit has the added advantage of a reservoir to store the coating.



### Elcometer 3800 & Elcometer 3805 Multiple Width Applicator - Doctor Blade

In some circumstances it may be required to compare two coatings side by side. The Elcometer multiple film applicator allows the user to apply either 2 or 3 coatings (dependant on selected model) at the same time.



### Elcometer 3508 & Elcometer 3560 Multiple Gap Applicator - 4 gaps with reservoir

This simple to use applicator has 4 pre-set film thicknesses, one on each edge. The Elcometer 3508 is supplied with two reservoirs making it ideal for use with the Elcometer 1720 Washability Tester, the Elcometer 3560 has a single reservoir.



### Elcometer 3505 Cube Film Applicator

Designed to be used with the Elcometer 5300 Linear Drying Time Recorder, the cube film applicator provides a thin film strip up to 1mm (40 mils) and is available as a single stripe applicator or as a 5 stripe version.



### Leneta Test Charts

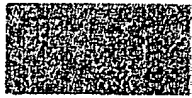
The industry standard in black and white test charts for use with film applicators.

[www.elcometer.com](http://www.elcometer.com)



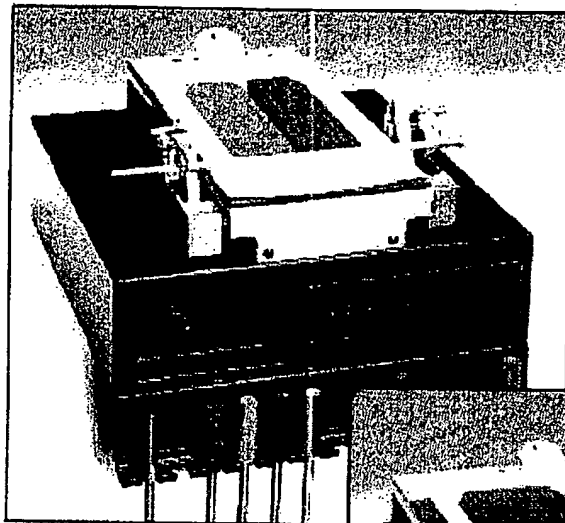
The first name in sample  
preparation equipment

Attachment 4



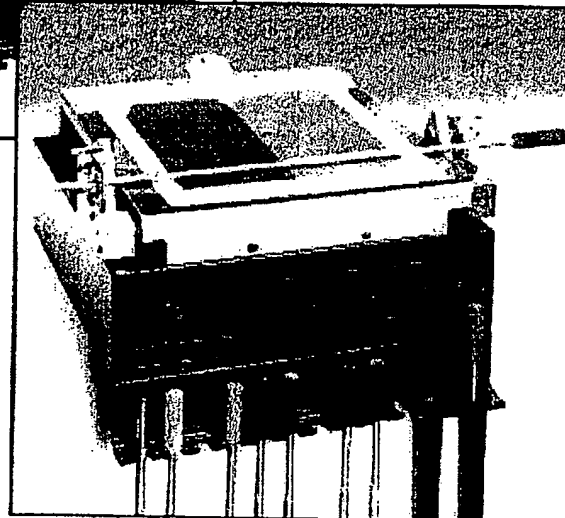
# K CONTROL COATER

Widely used for the application of paints, varnishes, adhesives, liquid printing inks and many other surface coatings to produce quick, **accurate & repeatable** samples. These may then be used for quality control and presentation purposes, R & D and computer colour matching data, etc, elements vital to a company's success in the modern world.



◀ MODEL 101

▼ MODEL 202



## MAIN FEATURES

- Controlled speed and pressure ensure repeatable results
- Coating by wire wound bars or gap applicators
- Easy to use, easy to clean
- Vacuum, magnetic, heated and glass beds available
- 250mm or 325 x 250mm
- Multiple coatings in one operation for comparison purposes
- Standard coating speeds infinitely variable between 2 and 15m/min

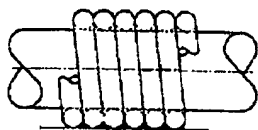
Two models offering coated areas up to 170 x



## METER BAR COATING

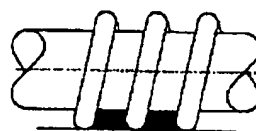
Meter bars provide the simplest method of applying accurate, repeatable layers of surface coatings on to most substrates. A meter bar is produced by winding precision drawn stainless steel wire on to a stainless steel rod resulting in a pattern of identically shaped grooves. These grooves then precisely control the wet film thickness. Close wound bars will produce coating thickness from 4 to 120µm. Higher coating weights up to 500µm can be obtained using spirally wound bars. A three-part Melinex/foam/rubber coating bed is supplied as standard. Vacuum, magnetic, heated and glass beds are also available, as detailed on the back page.

## STANDARD K101 AND K202 METER BARS



Close Wound

| BAR No. | COLOUR CODE | WIRE DIAMETER |      | WET FILM DEPOSIT |     |
|---------|-------------|---------------|------|------------------|-----|
|         |             | INS           | MM   | INS              | µm  |
| 0       | White       | 0.002         | 0.05 | 0.00015          | 4   |
| 1       | Yellow      | 0.003         | 0.08 | 0.00025          | 6   |
| 2       | Red         | 0.006         | 0.15 | 0.0005           | 12  |
| 3       | Green       | 0.012         | 0.31 | 0.0010           | 24  |
| 4       | Black       | 0.020         | 0.51 | 0.0015           | 40  |
| 5       | Iron        | 0.025         | 0.64 | 0.0020           | 50  |
| 6       | Orange      | 0.030         | 0.76 | 0.0025           | 60  |
| 7       | Brown       | 0.040         | 1.00 | 0.0030           | 80  |
| 8       | Blue        | 0.050         | 1.27 | 0.0040           | 100 |
| 9       | Tan         | 0.060         | 1.50 | 0.0050           | 120 |



Spirally Wound

| BAR No. | WIRE DIAMETER |      | WET FILM DEPOSIT |     |
|---------|---------------|------|------------------|-----|
|         | INS           | MM   | INS              | µm  |
| 150     | 0.010         | 0.26 | 0.006            | 150 |
| 200     | 0.014         | 0.36 | 0.008            | 200 |
| 300     | 0.020         | 0.51 | 0.012            | 300 |
| 400     | 0.030         | 0.76 | 0.016            | 400 |
| 500     | 0.040         | 1.00 | 0.020            | 500 |

Special bars to apply intermediate wet film deposits are manufactured to customer requirements. We stock wire diameters giving the choice of the following deposits (microns) when close wound.  
4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 76, 80, 84, 88, 90, 92, 96, 100, 104, 108, 110, 112, 116, 120, 128, 130, 140, 150.  
We also manufacture both wired metering bars and plain smoothing bars to fit all laboratory and production width coaters.

## COATING AREAS. All dimensions in mm.

MAXIMUM COATING AREA WHEN USING:-

METER BAR COATING WITH STANDARD (THREE-PART) BED

METER BAR COATING WITH GLASS BED

METER BAR COATING WITH VACUUM BED TYPE A

METER BAR COATING WITH VACUUM BED TYPE B

METER BAR COATING WITH MAGNETIC BED

METER BAR COATING WITH HEATED BED

MICROMETER ADJUSTABLE APPLICATOR

BIRD APPLICATOR

CUBE FILM APPLICATOR

4-SIDED APPLICATOR

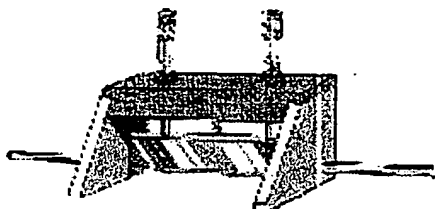
K WEDGE BAR

| MODEL NO. |           |
|-----------|-----------|
| 101       | 202       |
| 170 x 250 | 325 x 250 |
| 170 x 250 | 325 x 250 |
| 140 x 250 | 290 x 250 |
| 150 x 250 | 300 x 250 |
| 150 x 250 | 300 x 250 |
| 170 x 250 | 325 x 250 |
| 100 x 250 | 200 x 250 |
| 100 x 250 | 100 x 250 |
| 41 x 250  | 41 x 250  |
| 60 x 250  | 60 x 250  |
| 100 x 250 | 200 x 250 |

## GAP APPLICATORS

A range of adjustable or fixed gap applicators is available for use with the Control Coater. These are widely used for higher viscosity and thixotropic materials and for high coat weights.

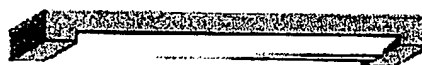
### MICROMETER ADJUSTABLE APPLICATOR



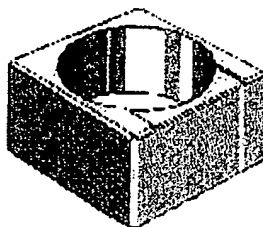
This applicator incorporates an adjustable spreading blade with micrometers to accurately set the substrate/blade gap from 0 - 10mm in 10µm increments, providing a most versatile tool. It gives a coating width of 100 mm or 200mm and produces a wet film thickness equal to the gap setting.

### BIRD APPLICATOR

Precision ground all over, these stainless steel applicators provide a coating width of 100mm and are available with gap sizes of 25, 50, 75, 100, 150 or 200µm. These Bird applicators produce a wet film thickness equal to half of the gap size.



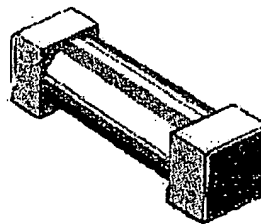
### CUBE FILM APPLICATOR



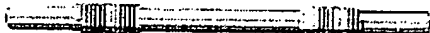
Made of precision ground stainless steel, the cube film applicator provides a coating width of 41mm. Each applicator is supplied with two gap sizes:- 50 and 100µm or 150 and 200µm. These applicators produce a wet film thickness equal to half of the gap size.

### 4-SIDED APPLICATOR

This device enables the user to coat four separate film thicknesses with a single applicator. Providing a coating width of 60mm, the 4-sided applicator is supplied with gap sizes of 30, 60, 90 and 120µm. It produces a wet film thickness equal to half of the gap size.



### K WEDGE BAR



The K Wedge Bar is an economical form of fixed gap applicator, produced by winding wire on to a stainless steel rod, as illustrated. Gaps between 50µm and 1500µm are available in 50µm steps. The wet film thickness is approximately equal to gap size and a coating width of 100mm or 200mm is produced.